

DOLOMANOVA, Yelizaveta Ivanovna; SHIPULIN, F.K., otv. red.; IVANOV, B.V.,  
red.izd-va; SHEVCHENKO, G.N., tekhn.red.

[Ingoda tin-wolframium deposits and their genetic characteristics]  
Olovianno-vol'framovye mestorozhdeniia Ingodinskogo rudnogo uzla i  
ikh geneticheskie osobennosti. Moskva, Izd-vo Akad.nauk SSSR, 1959.  
297 p. (Akademiia nauk SSSR, Institut geologii rudnykh mestorozhdenii,  
petrografii, mineralologii i geokhimii. Trudy, no.23) (MIRA 13:2)  
(Ingoda Valley--Tin ores)  
(Ingoda Valley--Tungsten ores)

3(1)

PHASE I BOOK EXPLOITATION

SOV/2464

Akademiya nauk SSSR. Komitet po meteoritam

Sikhote-Alinskiy zheleznyy meteoritnyy dozhd', tom 1 (Sikhote-Alin' Iron Meteorite Shower, Vol 1) Moscow, Izd-vo AN SSSR, 1959. 363 p. 1,200 copies printed.

Resp. Ed.: V. G. Fesenkov; Deputy Resp. Ed.: Ye. L. Krinov;  
Ed. of Publishing House: I. Ye. Rakhlin; Tech. Ed.: G. N. Shevchenko.

PURPOSE: This book is intended for earth scientists and astronomers interested in meteorite phenomena.

COVERAGE: The collection of articles is the first of three volumes devoted to a study of the Sikhote-Alin' iron meteorite shower which fell on February 12, 1947. Individual articles discuss the location of the fall, the types of craters formed by the impact, and the mineral composition of the meteorite fragments. Information presented in this series, including eyewitness reports, was obtained by members of the AN SSSR

Card 1/3

Sikhote-Alin' Iron Meteorite Shower, Vol 1

SOV/2464

Committee on Meteorites during its four expeditions made between 1947-50. Photographs accompany the text. No personalities are mentioned. No references are given.

TABLE OF CONTENTS:

Foreword	3
Fesenkov, V. G., and Ye. L. Krinov. The Fall and Study of the Sikhote-Alinskiy Iron Meteorite Shower	5
Shipulin, F. K., and L. N. Khetchikov. Geographic and Geologic Characteristics of the Location of the Meteorite Shower Fall	19
Divari, N. B. Phenomena Accompanying the Fall of a Meteorite Shower, and Its Trajectory in the Atmosphere	26
Krinov, Ye. L. Circumstances Surrounding the Fall of the Meteorite Shower	99
Card 2/3	

VASIL'YEV, Viktor Grigor'yevich; VOLKHONIN, Vladimir Stepanovich;  
GRISHIN, Grigoriy Leont'yevich; IVANOV, Andrey Khristianovich;  
MARINOV, Nikolay Aleksandrovich; MOKSHANTSEV, Konstantin Borisovich;  
SHIPULIN, F.K., doktor geologo-minerolog.nauk, red.;  
BEZMAN, Yu.K., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Geological structure of the Mongolian People's Republic;  
stratigraphic and tectonic] Geologicheskoe stroenie Mongol'skoi  
Narodnoi Respubliki; stratigrafiia i tektonika. Pod red. F.K.  
Shipulina. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-  
toplivnoi lit-ry, 1959. 493 p. (MIRA 12:3)  
(Mongolia--Geology)

BILIBIN, Yuriy Aleksandrovich; BETEKHTIN, A.G., akademik, glavnyy red.;  
SHIPULIN, F.K., otv.red.; ASTROV, A.V., red.izd-va; SHCHERBAKOV,  
A.V., tekhn.red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad.nauk SSSR.  
Vol.2. 1959. 496 p. (MIRA 12:5)  
(Siberia--Ore deposits) (Siberia--Petrology)

8 5210

S/035/60/000/010/017/021

A001/A001

3.9000(1041,1109,1327)

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 10,  
p. 88, # 10357

AUTHORS: Shipulin, F. K., Khetchikov, L. N.

TITLE: Geographic-Geological Characteristic of the Location of a Meteorite  
Shower

PERIODICAL: V sb.: Sikhote-Alinsk. zhelezn. meteoritn. dozhd'. Vol 1, Moscow,  
AN SSSR, 1959, pp. 19-25

TEXT: The site of Sikhote-Alin' meteorite shower fall is located within the boundaries of the western spurs of the Sikhote-Alin' range, in 75 km to north-east of the town of Iman. In the geological structure of the region take part, in addition to recent loose deposits, only effusive rocks and volcanic tuffs. Effusives are represented by quartz-free porphyries and albitophyres. Similar rocks in other regions reveal a compressive strength of up to 1,600 - 2,000 kg/cm<sup>2</sup>. Tuffs are spread on approximately 80% of the region area. In their mechanical properties tuffs differ only slightly from the effusives of the region.

Card 1/2

85210

S/035/60/000/010/017/021

AO01/A001

Geographic-Geological Characteristic of the Location of a Meteorite Shower

Compressive strength amounts probably to not less than 800- 1,000 kg/cm<sup>2</sup>. The overburden of recent loose deposits is developed everywhere and attains considerable thickness. Loose deposits are represented by diluvium, eluvium and alluvium. The thickness of eluvial-diluvial cover amounts to 1.5 - 2 m. It is overlaid by a soil layer of up to 0.5 m thickness. At the time of meteorite shower the upper part of the loose deposit cover was frozen down to a depth of 1 m.<sup>2</sup> Such grounds show compressive resistance of up to several dozens of kg per 1 cm<sup>2</sup>.

O. A. Kirova

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

SHIPULIN, F.K.

Hydrothermal deposit of native sulfur in the Mongolian People's  
Republic. Sov. geol. 2 no.8:155-157 Ag '59. (MIRA 13:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i  
geokhimii (IGEM AN SSSR).  
(Mongolia--Sulfur)



BETEKHTIN, A.G., KORZHINSKIY, D.S., SHATALOV, Ye.T., SHIPULIN, F.K.

Problems in geology. Geol. rud. mestorozh. no.2:94-110 Mr-Apr '60.  
(MIRA 13:8)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralologii i geokhimii AN SSSR, Moskva.  
(Geology, Economic)

SHIPULIN, F.K.

Theory of processes of contact metamorphism. Geol. rud. mestrozh.  
no.3:5-27 My-Je '60. (MIRA 13:7)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.  
(Metamorphism (Geology))

BETEKHTIN, A.G.; LEVITSKIY, O.D.; PUSHCHAROVSKIY, Yu.M.; SOKOLOV, G.A.;  
SHATALOV, Ye.T.; SHIPULIN, F.K.

Nikolai Sergeevich Shatskii; obituary. Geol. rud. mestorozh.  
no.5:3-5 S-O '60. (MIRA 13:10)  
(Shatskii, Nikolai Sergeevich, 1895-1960)  
(Geology)

SHIPULIN, P.K.

Time of the formation of metal-bearing solutions in the eruption of certain volcanoes. Geol. rud. mestorozh. no.5:25-33 S-O '60.

(MIRA 13:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralologii i geokhimii AN SSSR, Moskva.

(Volcanic ash, tuff, etc.)

SHIPULIN, F.K.

Academician Strashimir Dimitrov; 1892-1960. Geol. rud. mestorozh.  
no.6:113 M-D '60. (MIRA.14:3)  
(Dimitrov, Strashimir, 1892-1960.)

BILIBIN, Yuriy Aleksandrovich [deceased]; BETEKHTIN, A.G., akad., glav. red.;  
SHIPULIN, F.K., otv. red.; CHEPIKOVA, I.M., red. izd-va; VOLKOVA,  
V.Ye., tekhn. red.

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akad. nauk SSSR.  
Vol.3. 1961. 518 p. (MIRA 14:11)

(Geology)

BETEKHTIN, A.G.; VOL'FSON, F.I.; GENKIN, A.D.; DUBROVSKIY, V.N.; YEROFEYEV,  
B.N.; KONSTANTINOV, R.M.; MATERIKOV, M.P.; SOKOLOV, G.A.; STRAKHOV,  
N.M.; TATARINOV, P.M.; TOMSON, I.N.; SHADLUN, T.N.; SHATALOV, Ye.T.;  
SHIPULIN, F.K.

Oleg Dmitrievich Levitskii; obituary. Geol. rud. mestorozh. no.2:  
3-6 Mr-Ap '61. (MIRA 14:5)

(Levitskii, Oleg Dmitrievich, 1909-1961)

red. 100-va. GURKOVA, G.E., tekhn. red.; ASTAF'YEVA, G.A., tekhn.  
red.

[Intrusive rocks of the Leningorsk region of the Rudnyy Altai]  
Intruzivnye porody Leningorskogo raiona na Rudnom Altae. Moskva,  
Izdat-vo Akad.nauk SSSR, 1962. 183 p. (Akademiia nauk SSSR.  
Institut geologii rudnykh mestorozhdenii petrografii, mineralologii  
i geokhimii. Trudy, no.79.). (MIRA 15:6)  
(Leningorsk region (Rudnyy Altai)--Rocks, Igneous)



SHIPULIN, F.K.

Methods of mapping intrusives. Izv.vys.ucheb.zav.; geol. i razv.  
5 no.5:34-47 My '62. (MIRA 15:6)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,  
mineralogii i geokhimii AN SSSR.  
(Rocks, Igneous—Maps)

SHIPULIN, F.K.

Some genetic problems of the hydrothermal sulfide mineralization associated with independent small intrusions. Geol. rud. mestorozh. 5 no.2:3-27 Mr-Apr '63. (MIRA 16:6)

1. Institut geologii rudnykh mestorozhdeniy, mineralogii, petrografii i geokhimii AN SSSR, Moskva.  
(Sulfides)

ZVYAGINTSEV, Leonid Ivanovich; SHIPULIN, F.K., doktor geol.-  
miner. nauk, otv. red.

[Paleozoic volcanism in the southeastern part of the Rudnyy  
Altai] Paleozoiskii vulkanizm iugo-vostochnoi chasti Rudnogo  
Altaya. Moskva, Nauka, 1965. 155 p. (MIRA 18:3)

SHATALOV, Ye.T.; KOPTEV-DVORNIKOV, V.S.; RUB, M.G.; RODIONOV, D.A.;  
SHIPULIN, F.K.; FAVORSKAYA, M.A.

[Criteria of the relationship between mineralization and  
igneous activity as applied to the study of ore regions;  
basic principles of metallogenetic studies and the plot-  
ting of metallogenetic and forecasting maps of ore deposits]  
Kriterii svyazi orudneniia s magmatizmom primenitel'no k  
izucheniiu rudnykh raionov; osnovnye printsipy metallogeni-  
cheskikh issledovani i sostavleniia metallogenicheskikh i  
prognoznykh kart rudnykh raionov. Moskva, Nedra, 1965.  
292 p. (MIRA 18:4)

VINOGRADOV, A.P.; KORZHINSKIY, D.S.; SMIRNOV, V.I.; SHCHERBAKOV, D.I.;  
AYDIN'YAN, V.Kh.; VINOGRADOV, V.I.; VOL'FSON, P.I.; GENKIN, A.D.;  
DANCHEV, V.I.; LUKIN, L.I.; OZEROVA, N.A.; PEREL'MAN, A.I.; REKHARSKIY,  
V.I.; SMORCHKOV, I.Ye.; FEODOT'YEV, K.M.; SHADLUN, T.N.; SHIPULIN, P.K.

Aleksandr Aleksandrovich Saukov, 1902-1964; obituary. Geol. rud. mestorozh.  
7 no.1:124-125 Ja-F '65. (MIRA 18:4)

SHUPULIN, G. F.

"History of Intrusive Rocks of the Zyryanovsk Ore Region"

report delivered in the Petrographic Section, 4 April to 7 June 1957.

Chronicle of the Activity of the Petrography Section, Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskii, 1957, No. 6, pp. 118-122, 1957.

SHIPULIN, I.A. (Lipetsk)

Stimulating students in geography classes; from the practice  
of Lipetsk Province teachers. Geog. v shkole 25 no.4:38-44.  
Jl-Ag '62. (MIRA 15:8)

(Geography--Study and teaching)

SHIPULIN, I.A., (Lipetsk)

Filmstrips on Lipetsk Province. Geog. v shkole 25 no.5:59-61  
S-O '62. (MIRA 15:9)

(Lipetsk Province--Geography--Audio-visual aids)  
(Filmstrips)



Schipulin, I. F. -- "Investigation of the Operating Process of an Oblique Jet Turbine."  
Cand Tech Sci, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov, 13 Jan 54.  
(Vechernyaya Moskva, 4 Jan 54)

SO: SUM 168, 22 July 1954

SHIPULIN, I. I.

The following is among dissertations of the Leningrad Polytechnic Institute imeni Kalinin:

Transition Processes in the Drive of the System Generator-Motor with Excitation from an Electric Amplifier." 27 June 1949. Equations are derived of the transition processes in an electric drive and an evaluation is made of the assumptions made therein. On the basis of the resulting equations and experimental data, an analysis is made of the function of feedbacks and their interrelationships in transition processes, as a result of which a possible method of determining optimum parameters of the system can be founded.

SO: M-1048, 28 Mar 56

SHIPULIN, N.

These are our reserves. Okhr. truda i sots. strakh. no.1:45-48 JI  
'58. (MIRA 11:12)

1.Sekretar' Luganskego oblastnogo professional'nogo soveta.  
(Lugansk Province--Chemical industries)

SHIPULIN, N.

Relay race of triumphs. Okhr.truda i sots.strakh. no.3:63-64  
Mr '59. (MIRA 12:4)

1. Sekretar' Luganskogo oblsovprofa.  
(Lugansk Province--Coal mines and mining) (Safety measures)

SHIPULIN, N.

A new structure of trade-union organizations in the mining  
industry. Sov.profsoiuzy 7 no.10:31-34 My '59.  
(MIRA 12:9)

1. Sekretar' Luganskogo oblssovprofsoi.  
(Lugansk--Coal mines and mining--Labor productivity)



L 40293-65

ACCESSION NR: AP5003940

...oil. In the first settling tank, easily changed ...  
...oil. In the first settling tank, easily changed ...  
...oil. In the first settling tank, easily changed ...

...oil. In the first settling tank, easily changed ...  
...oil. In the first settling tank, easily changed ...  
...oil. In the first settling tank, easily changed ...  
art. has: 2 figures.

ASSOCIATION: Azovskoye upravleniye uglerudovoznogo flota (Azov Administration  
...)

... SUB: ...  
... OTHER: ...

Card 2/2

SHIPULIN, N.

Use of perolon on steamers for feedwater purification from oil.  
Mor.flot 25 no.1:28 Ja '65. (MIRA 18:2)

1. Nachal'nik teploekhnicheskoy laboratorii Azovskogo  
upravleniya uglerudovoznogo flota.



SHIPULIN, N.G.

This can also be done in the Donets Basin. Zdorov'ie 6 no. 11:28  
N '60. (MIRA 13:10)

1. Sekretar' Luganskogo oblastnogo soveta profsoyuzov.  
(LUGANSK PROVINCE---INDUSTRIAL HYGIENE)

SHIPULIN, N. (g.Lugansk)

Workers motion-picture amateurs popularize progressive practice.  
Sov. profsciuzh 17 no. 2:43,45 Ja '61. (MIRA 14:2)  
(Lugansk—Motion pictures in industry)

D'YACHENKO, Vladimir Dmitriyevich, inzh.; SHIPULIN, P.P., kand.tekhn.  
nauk, red.; GVIRTS, V.L., tekhn.red.

[Automatic control of electric lightning conditions; from  
experience obtained at the Izhora plant] Avtomaticheskoe  
upravlenie rezhimom elektricheskogo osveshcheniia; iz opyta  
Izhorskogo zavoda. Leningrad, 1959. 14 p. (Leningradskii  
dom nauchno-tekhnicheskoi propagandy. Obmen poredovym opytom.  
Serii; Energetika, vyp.1). (MIRA 13:3)  
(Power plants--Lighting) (Automatic control)

OLEYNIKOV, Viktor Alekseyevich, kand. tekhn. nauk; BELYKH, Ivan Kalistratovich, inzh.; BARANOVSKIY, Boris Grigor'yevich, inzh.; SIDOROV, Anatoliy Ivanovich, inzh.; SHIPULIN, P.P., kand. tekhn. nauk, red.; YEGOR'KOV, N.F., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Servo system for electric spark machining] Slediashchaia sistema dlia elektroerozionnogo stanka. Leningrad, 1960. 21 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seria: Elektricheskie metody obrabotki materialov, no.4)

(MIRA 14:10)

(Electric metal cutting) (Automatic control)

ACC NR: AP6022721

(A)

SOURCE CODE: UR/0154/65/000/006/0065/0070

AUTHOR: Shipulin, V. D. (Aspirant)

ORG: Khar'kov Institute of Engineers of Community Building (Khar'kovskiy institut inzhenerov kommunal'nogo stroitel'stva)

TITLE: The accuracy of locating in space a geodesic point defined by the lengths of its sides

SOURCE: IVUZ. Geodeziya i aerofotos"yemka, no. 6, 1965, 65-70

TOPIC TAGS: geodesy, astronomic geodesics, tensor analysis

ABSTRACT: In tensor notation, the error of locating a point in a three-dimensional space is a tensor of the second rank. The components of this tensor are expressed in the form of determinants. The error in locating a point depends on the angle between these two measured courses and on the cosines of the courses. In other words, the error depends on the form of the trihedron formed by the gradients of the measured functions, and on the orientation of this trihedron relative to the chosen system of coordinates. It is shown that the best form of this trihedron is one for which the gradients of the measured functions are mutually perpendicular. Then, the error remains undetermined only at angles of 0 and 120°. An error in any direction including errors along the coordinate axes is a radius vector of the polar surface of a certain ellip-

UDC: 528. 35

Cord 1/2

ACC NR: AP6022721

soid. Recommended by the Chair of City Planning and Management of KhIIKS. Orig. art.  
has: 35 formulas, 1 table.

SUB CODE: 08,17/      SUBM DATE: 08Jun65/      ORIG REF: 005/      OTH REF: 001

Cord 2/2

SHIMULIN, V.N.

Isolation of the solid hydrocarbon phase in wells in paraffinic  
petroleum production. Izv. vys. ucheb. zav., neft' i gaz 6  
no.7:33-36 '63. (MIRA 17:8)

1. Grcznenskiy neftyancy institut.

SHIPULIN, V. P.

Shipulin, V. P. "Closed-in gypsum bandage - a choice method of immobilization during the first surgical treatment of fractures caused by firearms in war and army regions," Trudy Medinstituta (Izhev. soc. med. in-t), Vol. VII, 1949, p. 109-12

SO: V-3870, 14 June 52, (Izvestia Zhurnal Vyssh Statey, No. 5, 1949)



SHIBULIN, V. P.

Shibulin, V. P. "Treatment of early sepsis by intravenous drop infusions of white streptocide and glucose under conditions of KhPPG I and II," Trudy Volinstituta (Izhev. gos. med. in-t), Vol VII, 1942, p. 126-30

SO: U-3050, 14 June 52, (Letenskiy Zhurnal Vnykh Statov, No. 5, 1942)

STRAKHOVA, A.F.;SHIPULINA, A.A.

Psychoprophylactic method in painless labor. Akush. gin., Moskva no.5:  
86-87 Sept-Oct 1952. (GIML 23:2)

1. Of Vologda Municipal Maternity Home (Head Physician -- A. F. Strakhova).

ACC NR: AT0024969

SOURCE CODE: UR/0000/65/000/000/0128/0131

AUTHOR: Boroyavlonskiy, A. F.; Oranskaya, I. P.; Shipulina, G. V.

59

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

B+1

TITLE: Effect of temperature, current density, and electrolyte concentration on the composition and structure of anodic films on ML-5 alloy

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Zashchitnyye metallizatsionnye i oksidnyye pokrytiya, korroziya metallov i issledovaniya v oblasti elektrokhimii (Protective metallic and oxide coatings, corrosion of metals, and studies in electrochemistry). Moscow, Nauka, 1965, 128-131

TOPIC TAGS: magnesium alloy, phosphate, anodic oxidation, *radioisotope, temperature effect, on ML-5 alloy*

ABSTRACT: Using the  $P^{32}$  radioisotope, the authors studied the incorporation of electrolyte ions ( $PQ_4^{3-}$ ) in the anodic film on the magnesium alloy ML-5 as a function of the conditions of the process. As the temperature rises above  $60^\circ$ , the amount of  $PQ_4^{3-}$  incorporated in the film tends to decrease. Part of the  $PQ_4^{3-}$  ions become structurally incorporated in the film, and part are held by adsorption forces, and as the temperature rises, the quantity of adsorbed  $PQ_4^{3-}$  ions decreases. As the current density rises, the relative content of  $PQ_4^{3-}$  increases, reaching 3% of the weight of the film; this is attributed to changes in the structure of the film (increase in porosity, true surface, etc.) caused by high current densities. As the electrolyte con-

Card 1/2

L 57742-65 ENT(1)/ENT(2)/EPF(c)/ENP(1)/ENA(2)/EPR/ENP(c)/ENP(b) Pg-4 IJP(c)  
RECORDED IN APR 21 1966 RECORDED IN APR 21 1966

AUTHOR: Bogoyavlenskiy, A. P.; Balov, V. Y.; Trofimov, A. M.; Sipalina, G. V.;  
Vagina, I. A.; L'rov, G. E.

TITLE: Quick method of evaluating the protective properties of sodic oxide film  
on aluminum

SOURCE: Lavovskaya laboratoriya, v. 11, no. 7, 1965, 816-819

TOPIC TAGS: anodic oxide film, oxide film, galvanic circuit, elec.olyte solution,  
electromotive force, protective film, VLAM electrolyts (solution of potassium bi-  
chromate in sulfuric acid)

ABSTRACT: The authors describe a method they developed for the quick determination  
of the protective properties of oxide film on aluminum, based on utilizing the  
electromotive force of a galvanic circuit. The authors

Card 1/3

L 57742-65

ACCESSION NR: AP5017091

let of electrolyte solution 1 (see figure) was deposited on the purified and degreased surface of non-anodized aluminum so as to immerse part of the vertically positioned platinum wire 4 in this droplet. Wire 4 is linked to the specimen by external circuit 5. The platinum wire was fastened on a special bracket 6. Or

ASSOCIATION: Kazanskiy aviatsionnyy institut (Kazan' Aviation Institute)

SUBMITTED: 00

REC'D: 01

SUB CODE: XX, XX

NR REF BOV: 002

OTHER: 000

Card 2/3

ZARAYSKIY, P.K.; ROTT, M.V.; SENYUTA, V.N.; SHUKH, Ya.I.; MARKOV, A.Ye.;  
Prinimala uchastiye SHIPULINA, L.A.

Soda-potash method for hydrogen sulfide removal from coke-oven  
gas. Koks i khim. no.4:40-43 '62. (MIRA 16:8)

1. Rutchenkovskiy koksokhimicheskiy zavod.  
(Gases—Purification) (Hydrogen sulfide)

ZDOROV, Pavel Aleksandrovich; SHIPULINA, L.M., red.

[Use of plastics and synthetic resins in the manufacture  
of machinery; materials for lectures] Primenenie plasti-  
cheskikh mass i sinteticheskikh smol v mashinostroenii;  
materialy k lektsiiam. Moskva, Izd-vo "Znanie," 1964. 22 p.  
(MIRA 17:11)

GRIGOR'YANTS, Vil' Valentinovich; SHIPULINA, L.M., red.

[Extended plan of a lecture on the subject: "Quantum electronics - a new field of physics"] Razvernutyi plan lektsii na temu: "Kvantovaya elektronika -- novaya oblast' fiziki." Moskva, Izd-vo "Znanie," 1964. 11 p.  
(MIRA 17:10)



NEYMAN, L.R.; GLINTERNIK, S.R., kandidat tekhnicheskikh nauk; YEMEL'YANOV, A.V., inzhener; SHIPULINA, N.A., kandidat tekhnicheskikh nauk.

Group connection of electron tubes as a means for increasing the reliability of high-power converters. Elektrichestvo no.6:54-59 Je '56.

(MLRA 9:9)

- 1.Chlen-korrespondent AN SSSR (for Neyman).
- 2.Energeticheskiy institut imeni Krzhizhanevskogo AN SSSR (for Neyman, Glinter nik, Yemel'yanov).
- 3.Institut postoyannogo toka Ministerstva elektrostantsii (for Shipulina).

(Electron tubes)(Electric current converters)

SHIPULINA, N.A.

SHIPULINA, N.A.

8(1)

PHASE I BOOK EXPLOITATION

NOV/1986

Moscow. Nauchno-issledovatel'skiy institut postoyannogo toka

Peredacha energii postoyannaya i peremennaya tokom (Power Transmission by Direct and Alternating Current) Moscow, Gosenergizdat, 1978. 334 p. (Series: Itogi nauki i tekhn., ch. 5) 3,350 copies printed.

Ed.: Platonov, A.M.; Tech. Ed.: Voronobskaya, L.V.; Editorial Board: Shchedrin, S.S., Doctor of Technical Sciences, Corresponding Member, USSR Academy of Sciences, Professor (Chief Ed.); Gortalsk, A.K., Engineer; Yemel'yanov, V.I., Candidate of Technical Sciences; Platonov, V.P., Candidate of Technical Sciences; Platonov, A.K., Candidate of Technical Sciences; Ponom, A.V., Candidate of Technical Sciences; Sere, L.A., Doctor of Physical and Mathematical Sciences, Professor; Sosin, M.B., Engineer; Shukhtana, M.G., Candidate of Technical Sciences.

FIGURE: This collection of articles, issued by the USSR Ministry of Electric Power Stations, is intended for scientists, engineers and designers of high-voltage overhead transmission lines.

Ch. 4 1/33

Shukhtana, M.G. and N.A. Shipulina. Parameters of Equipment of Conversion Substations in the Bashira-Moscow D-C Transmission Line 129  
Firing of mercury rectifiers causes current oscillations in a tens and hundreds Hz/sec frequency range. Study of this source of radio interference requires exact knowledge of equipment parameters for frequencies up to 1 Mc. The authors describe methods of measuring parameters and discuss the results obtained in the experimental Bashira-Moscow d-c transmission line. The three data tables are recommended for practical use for those working in radio interference engineering. 4 diagrams and no references.

Ch. 4 1/33

SHILKUN, A. C.

1. *... ..*

8(c)

### PLANS & BOOK EXPLOITATION

80V/1386

№ 600. Nauchno-issledovatel'skiy institut postoyannogo toka

Peredacha energii postoyannymi i peremennymi tokom (Power Transmission by Direct and Alternating Current) Moscow, Gosenergizdat, 1958. 354 p. (Series: Ito: Izvestiya, sb. 3) 3,350 copies printed.

Ed.: Platov, A.M., Tech. Ed.: Voronotskaya, L.V.; Editorial Board: Shchedrin, S.F., Doctor of Technical Sciences, Corresponding Member, USSR Academy of Sciences; Professor (Chief Ed.): Gertel, A.S., Engineer; Koval'skiy, V.I., Candidate of Technical Sciences; Platonov, V.P., Candidate of Technical Sciences; Platov, A.K., Candidate of Technical Sciences; Ponom, A.V., Candidate of Technical Sciences; Sam, L.A., Doctor of Physical and Mathematical Sciences, Professor; Sosin, M.R., Engineer; Shustova, N.G., Candidate of Technical Sciences.

**PURPOSE:** This collection of articles, issued by the USSR Ministry of Electric Power Stations, is intended for scientists, engineers and designers of high-voltage overhead transmission lines.

Card 1/23

Shipman, V.A. Bridge System With Capacitors Connected in Series To  
Circuit Windings of the Transformer  
The author examines the

The author explains the theory and discusses the results of experimental investigation on the above problem. There are 12 diagrams and no references.

24

SHEKHTMAN, M.O.; SHIFULINA, N.A.

Parameters of the equipment of converting substations in the  
Kashira-Moscow d.c. power line. Izv.NIIPT no.3:129-142 '58.  
(MIRA 12:1)

(Electric substations) (Electric measurements)

SHIPULINA, N.A.

Investigating a bridge circuit with series condensers in the  
circuit windings of transformers. Izv.NIIP no.3:234-254  
'58. (MIRA 12:1)

(Electric circuits)

SOV/105-59-3-5/27

8(3)

**AUTHORS:**

Kukekov, G. A., Candidate of Technical Sciences, Docent,  
Sorokin, P. G., Engineer, Shipulina, N. A., Candidate of Technical  
Sciences (Leningrad)

**TITLE:**

Switch-off Contactors for High-tension Direct Current Transmission  
Lines (Otklyuchayushcheye ustroystvo dlya liniy postoyannogo toka  
vysokogo napryazheniya)

**PERIODICAL:**

Elektrichestvo, 1959, Nr 3, pp 24-27 (USSR)

**ABSTRACT:**

The use and the further development of d.c. long-distance trans-  
mission lines in many respects depends upon the creation of new  
electrical equipment and installations. Such devices include con-  
tactors designed to disconnect powerful and highly inductive high-  
tension d. c. circuits. The principal difficulty encountered in  
this problem consists of the fact that it is much more difficult  
to suppress the flashover arc in d. c. circuits than in a. c. cir-  
cuits. In the course of the investigations carried out in the  
Leningradskiy politekhnicheskii institut im. Kalinina (Leningrad  
Polytechnical Institute imeni Kalinin) and at the Institut postoyan-  
nogo toka (Institute of Direct Current) (Refs 1,2) it was found that  
if the d. c. arc is shunted by an oscillation circuit with cor-  
responding parameters and initial conditions - the current in the

Card 1/3

SOV/105-59-3-5/27

Switch-off Contactors for High-tension Direct Current Transmission Lines

arc changes its direction and hence that it may pass through zero. As was shown by experiments, this provides a means of extinguishing the arc in arc-suppression devices of high-tension alternating current contactors, even if the frequency of the oscillations is somewhat higher (500 - 1000 cycles). In this paper a short analysis of the performance of contactors designed on this principle and a description of the experiments carried out with these contactors is given. This model contactor was tested at the rectifier sub-station of the experimental d.c. transmission line from the Kashira water power station to Moscow. Three test series were carried out.

Summary: 1) If a high-tension a.c. arc-suppression device is combined with an oscillation circuit, which shunts the arc generated in the arc-suppression device when the contactor disconnects the line, it is possible to create a device which is able to disconnect high-tension d.c. transmission lines. 2) If the oscillation circuit is designed correspondingly to the arc characteristic, no previous charging of the oscillation circuit capacity is required. 3) At present air contactors are considered to be the most convenient type, because the contacts remain open after disconnecting. The rest charge on the condenser must be destroyed by a special device which is built-in in the contactor. -There are 6 figures and 5 Soviet

Card 2/3

SOV/105-59-3-5/27

Switch-off Contactors for High-tension Direct Current Transmission Lines

references.

SUBMITTED: July 23, 1958

Card 3/3



BERLIN, Ye.M.; ZAVARINA, M.G.; SHIPULINA, N.A.

Operating conditions and regulating system for the transmission  
of direct current with intermediate substations connected in parallel.  
Izv. NIIPT no.4:5-18 '59. (MIRA 13:2)  
(Electric substations)

KRYLOV, M.T.; LESHUKOV, N.D.; SHIPULINA, N.A.

Interruption of direct current transmission by means of special  
cutout devices during normal operation. Izv. NIPT no.5:64-79  
'60. (MIRA 14:1)

(Electric cutouts)

(Electric power distribution--Direct current)

LESHUKOV, N.D.; SHIPULINA, N.A.

Transient processes in d.c. power transmission system with an  
intermediate substation. Izv. NIPT no.7:36-55 '61. (MIRA 14:9)  
(Electric power distribution--Direct current)

LESHUKOV, N.D.; SHIPULINA, N.A.

Disconnecting of branch sections in a d.c. power transmission  
system. Izv. NIIPT no.7:56-77 '61. (MIRA 14:9)  
(Electric power distribution--Direct current)

SHIPULINA, N.A.

Parallel operation of inverters in the Kashira-Moscow electric  
power transmission system. Izv. NIPT no.8:32-56 '61. (MIRA 15:7)

(Electric power distribution—Direct current)

AC: NR: AT6021542

SOURCE CODE: UR/2995/65/000/011/0303/0326

AUTHOR: Kanashchenko, N. A.; Leshukov, N. D. (Candidate of technical sciences); Shipulina, N. A.

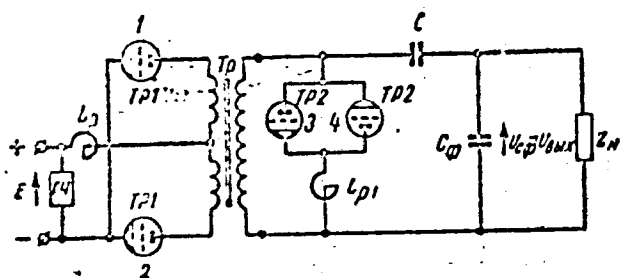
ORG: none

TITLE: Autonomous 12-kw, 220-v, 50-cps parallel-series inverter

SOURCE: Nauchno-issledovatel'skiy institut postoyannogo toka. Izvestiya, no. 11, 1965. Peredacha energii postoyannym i peremennym tokom (D.c. and a.c. power transmission), 303-326

TOPIC TAGS: dc ac inverter, autonomous inverter, *thyatron, electronic*

ABSTRACT: The development of a new 12-kw, 220-v, 50-cps separately-excited parallel-series-circuit (see figure) inverter by the NIPT institute is reported. Intended for emergency supply of telecommunication plants, the new inverter uses thyatrons, each of them being fired after the preceding one has been completely extinguished. Design data and test results of this inverter are set forth



Card 1/2

SHIPULINA, V.G., kand.geol.-mineral.nauk.

~~SHIPULINA, V.G.~~  
Engineering and geological aspects in the construction of  
central buildings on State grain farms in the Akmolinsk Province  
virgin lands. Sbor.nauch.trud. KazGMI no.14:107-128 '56.

(MIRA 10:10)

(Akmolinsk Province--Housing, Rural)  
(Geology, Structural)

BOCHKAREV, V.P.; SHIPULINA, V.G.

Eighth Conference on the Study of Reservoir Coasts. Izv. AN  
Kazakh.SSR. Ser.geol. no.4:107-111 '61. (MIRA 15:3)  
(Baikal, Lake--Coast changes)



SHIPUL'KIN, V. (Shipul'kin, V.)

Rohina Asiadach, a field crew leader. Rab. i sial. 35 no.4:5  
Ap '59. (MIRA 12:12)

1. Kolkhoz "Radzyna," Iveskiy rayon.  
(Iv'ye District--Corn (Maize))

SHIPULIN, V.N.

Formation of a new phase in a well in paraffin oil production.  
Trudy MINKH1GP no.48:253-259 '64. (MIRA 18:3)

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520008-7

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549520008-7"

69843

S/051/60/008/03/030/038  
E201/E191

5.4/30

AUTHOR: Prokhorov, A.M., and Shipulo, G.P.

TITLE: A Radio-Spectroscopic Investigation of the  $F_3BNH_3$  and  $F_3BN(CH_3)_3$  Molecules

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3, p 419 (USSR)

ABSTRACT: The  $F_3BNH_3$  and  $F_3BN(CH_3)_3$  molecules have the configurations of symmetrical tops. Their rotational spectra were investigated by the authors in the vapour phase using a radio-spectroscope with electrical molecular modulation and an absorption cell capable of standing temperatures up to 200 °C. No absorption lines of  $F_3BNH_3$  were found in the region 9000-35000 Mc/s because in the vapour phase this molecule is strongly dissociated into  $BF_3$  and  $NH_3$ . For the  $F_3BN(CH_3)_3$  molecule 10 rotational transitions were found in the region 7000-35000 Mc/s. A rotational constant B was found to be 1750 Mc/s which differed by only 4% from the theoretical value [for  $F_3BN(CH_3)_3$  in the solid phase this constant was reported as  $B = 1830$  Mc/s (Ref 1)]. For the 2-3 transition of  $F_3BN(CH_3)_3$  the dipole moment was estimated

Card  
1/2

69843

S/051/60/008/03/030/038

R201/E191

A Radio-Spectroscopic Investigation of the  $F_3BNH_3$  and  $F_3BN(CH_3)_3$   
Molecules

to be 5 Debye units. The complex nature of the observed rotational transitions of  $F_3BN(CH_3)_3$  is primarily due to the non-rigidity of the molecule and the presence of the  $F_3B$  and  $N(CH_3)_3$  groups in it which can execute torsional vibrations. Moreover each rotational transition may have structure due to isotopes  $B^{11}$  (81%) and  $B^{10}$  (19%). There are 4 references, of which 2 are Soviet and 2 English.

Card  
2/2

SUBMITTED: October 9, 1959

SHIPULO, G.P.

Rotational spectrum of the cyanamide molecule. Opt. i spektr. 10  
no.4:553-554 Ap '61. (MIRA 14:3)  
(Cyanamide--Spectra)

S/051/62/013/004/015/023  
EO32/E314

AUTHOR: Shipulo, G.P.

TITLE: The microwave spectrum of the HDNCN and D<sub>2</sub>NCN molecules

PERIODICAL: Optika i spektroskopiya, v. 13, no. 4, 1962,  
593 - 594

TEXT: This is a continuation of previous work (Opt. i spektr., 10, 553, 1961). The microwave spectrum was investigated using vapours at room temperature and the method of electric molecular modulation. The spectra obtained are given in Table 1. These spectra are characteristic of molecules in the form of an elongated symmetric spinning top. The rotational constants, vibrational frequencies and dipole moments obtained from the spectra are given in Table 2. The vibrational frequencies were determined from line-intensity ratios and the dipole moments were determined from the Stark effect for the transition  $0_{00} \rightarrow 1_{01}$ .

It is stated that the observed spectra are best interpreted in terms of the plane rather than the pyramidal model. The symmetry can only be determined with the aid of infrared studies which, Card 1/2

L 10745-63

EWA(k)/EWT(1)/FED/T-2/EDS/3W2/EEG(b)-2/ES(t)-2

AFTAC/

ASD/EDS-3/RADC/APGC/AFWL FL-4/Po-4 LJP(C)/WG/K/JHB/EH

ACCESSION NR: AP3003155

S/0056/63/044/006/2180/2182 85

AUTHOR: Askar'yan, G. A.; Prokhorov, A. M.; Chanturiya, G. F.; 81  
Shipulo, G. P.

<sup>35</sup>  
TITLE: Laser beam in liquid

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 2180-2182

TOPIC TAGS: laser effects, photohydraulic effects, laser beam in liquid

ABSTRACT: An experimental study of the effects of focused and unfocused laser beams on liquids had been carried out. A ruby laser with a beam pulse duration of approximately 1 microsec was used. Bubble formation due to focused and unfocused beams was observed and photographed in water. In ordinary tap water the formation of bubbles ceased with decreased beam intensity, while in gassed water no such decrease was observed. Special control experiments showed that light scattering

Card 1/2



L 10725-63

ACCESSION NR: AP3003155

3

takes place on the bubbles and not on inhomogeneities in the liquid. The size of the bubbles and the light scattering parameters were calculated. An oscillographic study of the scattering process showed that scattering changes in time and that the scattering centers increase the scattering effect. Photohydraulic effects occurring during focusing of the beam near or on the surface of a plate immersed in liquid were noted. Explosive local boiling, downward and upward motion of the plate, changes in the nature of the orifice drilled in the plate by the beam, rupturing of the vessel by shock waves, and ejection of liquid from the impact area were also observed. Increases in the absorption of light by the water, brought about through addition of copper sulfate, led to a sharp increase in the intensity of photohydraulic effects. The height of the ejected stream reached one meter, and in some cases almost all the water was ejected from the vessel. "In conclusion the authors express their gratitude to V. S. Zuyev and V. K. Konyukhov for participation in the preliminary experiments with gassed liquids conducted in the summer of 1962." Orig. art. has: 2 formulas.

Card 2/12

Phys. Inst. Academy of Sciences

SHIPULO, G. P.

ACCESSION NR: AP4011484

S/0051/84/016/001/0058/0062

AUTHOR: Gvaladze, T.V.; Konyukhov, V.K.; Prokhorov, A.M.; Khaimov-Mal'kov, V.Ya.; Shipule, G.P.

TITLE: R-absorption lines of ruby

SOURCE: Optika i spektroskopiya, v.18, no.1, 1984, 58-62

TOPIC TAGS: R absorption, R levels, R line luminescence, ruby, optical pumping, lasers, luminescence lifetime

ABSTRACT: Although there have been many investigations of the luminescence of R-lines of ruby, hitherto there have been no detailed studies of the absorption in the region of these lines. Study of the absorption can yield information on the frequency variation of the absorption coefficient,  $\alpha(\nu)$ , and the temperature dependence of  $\int \alpha(\nu) d\nu$ , which is indicative of the temperature variation of the matrix element of the dipole moment. In the present work the R-line absorption of ruby ( $\text{Cr}_2\text{O}_3$  concentration 0.04% by weight) was investigated at 18, 60, and 95°C. The measurements were performed with the aid of a DFS-13 diffraction grating spectrograph (dispersion 4 Å/mm) with photographic recording and a DFS-8 grating spectrograph (6 Å/mm) with

Card 1/2

ACC.NR: AP4011484

photoelectric recording. The values of  $\alpha(V)$  for the  $R_1$  and  $R_2$  lines are 0.315 and 0.24, respectively, and are virtually temperature independent in the 16 to 95°C temperature range. Reabsorption was found to be negligible under the given conditions. The luminescence lifetimes of the  $R_1$  and  $R_2$  lines, calculated on the basis of the experimental data, are of the order of 2.9 and 4.2 microsec, respectively. The relative intensities of the R luminescence lines are proportional to the populations of the respective levels and inversely proportional to  $\gamma(R)$ . The  $R_2/R_1$  intensity ratio for  $T = 93^\circ\text{K}$ , derived from the present data, is about 0.43, which is in exact agreement with the experimental value of N.A.Tolstoy, Liu Shun-fu, and M.E.Lapidus (Opt.1 spektro.,13, 242, 1962). Orig.art.has: 14 formulas, 2 tables, and 1 figure.

ASSOCIATION: none

SUBMITTED: 18Mar63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NR REF SOV: 003

OTHER: 005

Card 2/2

RAMENSKAYA, A.A.; KORNILYENKO, L.S.; MASSIMOVA, G.V.; OSISO, V.V.; PROKHOROV, A.M.;  
SHARILLO, G.P.

Longitudinal GaAs<sub>0.5</sub>P<sub>0.5</sub> laser operating at room temperature. Zhur.  
Opt. i spektr. 1965, 1:31-35. (MIRA 18:8)

1. In vitro gas-film film' Moskovskogo gosudarstvennogo universiteta  
2. In vitro gas-film film' Institut' imeni Lebedeva AN SSSR.

62763-65 EWA(k)/FED/ENG(r)/ENT(1)/EWP(e)/ENT(m)/EEC(k)-2/EWP(1)/T/EWP(t)/EEC(b)-2/  
EWP(k)/EWP(b)/EWA(m)-2/EWA(h)/ENG(m) Pa-4/Pn-4/Po-4/Pq-4/Pf-4/Peb/Pi-4/Pi-4  
SGTB/IJP(c) WC/RDW/JU/JAL/WH  
ACCESSION NR: AP5019213 UR/0056/65/049/001/0031/0035

AUTHOR: Kaminskiy, A. A.; Korniyenko, L. S.; Maksimova, G. V.; Osiko, V. V.;  
Prokhorov, A. M.; Shipulo, G. P.

TITLE: CW  $\text{CaWO}_4:\text{Nd}^{3+}$  laser operating at room temperature

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965,  
31-35

TOPIC TAGS: CW laser, neodymium laser, glass laser, room temperature laser,  
water cooled laser

ABSTRACT: The design and fundamental characteristics of a CW neodymium-doped  $\text{CaWO}_4$  water-cooled laser, operating at room temperature, are described in detail. Single crystals were grown by the Czochralski method. The  $\text{CaWO}_4$  mixture was prepared by sedimentation. The starting materials were ammonium paratungstate and calcium chloride, specially refined for this purpose. The neodymium was introduced in the form of a binary salt  $\text{Nd}(\text{WO}_4)_2$ .  $\text{Na}_2\text{WO}_4$  was introduced into the melt in a concentration seven times greater than that of Nd. Growth was conducted on seed crystals oriented according to both axis c and axis a at a rate of 7-12 mm/hr for a seed rotation of 50 rpm. The neodymium concentration was varied from 0.1 to 5 percent.

Card 1/3

L 62763-65

ACCESSION NR: AP5019213

Reduction of the growth rate from 12 to 7 mm/hr led to significant improvement in the optical quality of the crystal. The infrared luminescence of the neodymium ions due to transitions from the  $^4F_{3/2}$  level to the different levels of the  $^4I$  multiplet (the most intense luminescence being at 1.06  $\mu$ , which corresponds to the transition  $^4F_{3/2} \rightarrow ^4I_{11/2}$ ) and its absorption spectrum were considered. A crystal 5 mm in diameter and 42 mm long with an  $Nd^{3+}$  concentration of about 3.0 percent, was selected for the laser. The lifetime of the excited state  $^4F_{3/2}$  of this crystal at room temperature and lower was 172  $\pm 2$   $\mu$ sec. A xenon lamp was placed at one focal point of an elliptical reflector, while the working crystal (ZnS-17 glass) was placed at the other. The optical resonator consisted of multilayer dielectric mirrors placed at the confocal ends of the crystal. The laser operated at  $\lambda = 10,584$  Å with a line width of approximately 1 Å. The laser action was sustained at a pumping power of 2.6 kw, and a 40% increase in the threshold power resulted in a laser output of several tens of mw with a 1° beam divergence. The threshold of the working crystal pulse excited by a 2.6-kv pumping source was 2 j. Basic difficulties in constructing a  $CaWO_4:Nd^{3+}$  laser are shown to be the selection of suitable transmission bands and the selection of the crystal diameter for a given  $Nd^{3+}$  concentration. Orig. art. has: 5 figures.

[YK]

Card 2/3

L 62763-65

ACCESSION NR: AP5019213

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta  
(Institute of Nuclear Physics, Moscow State University); Fizicheskiy institut im.  
P. N. Lebedeva-Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 25Jan65

ENCL: 00

SUB CODE: EC

NO REF SOV: 004

OTHER: 007

ATD PRESS: 4036

Alum  
Card 3/3

L 1772-66

ACCESSION NR: AP5024687

AUTHOR: Zolotov, Ye. M.; Prokhorov, A. M.; Shipulo, G. P.

TITLE: Luminescence and generation in  $\text{CaF}_2:\text{Dy}^{2+}$  excited by a ruby laser

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 3, 1965, 720-723

TOPIC TAGS: laser, stimulated emission, ruby laser, optical excitation, light modulation

ABSTRACT: Laser action at  $\lambda = 2.36\mu$  is reported in  $\text{CaF}_2$  doped with 0.03%  $\text{Dy}^{2+}$  at a temperature of 77K. Pumping was by a ruby laser operated in normal and giant pulse regimes. The 20-mm-long rod with a 5-mm diameter had silver and dielectric coatings (reflection coefficient of the coating was 95%). In the normal pulsed operating regime the threshold pump power was 0.1 j. The spike pattern of the  $\text{CaF}_2:\text{Dy}^{2+}$  laser output was similar to that of the ruby laser and the spikes appeared not later than  $10^{-6}$  sec after their appearance in the ruby laser output. This indicates the possibility of modulating with a frequency not less than 1 megagigahertz by means of light excitation using, for example, semiconductor lasers. No spikes were observed at a resolution of  $\sim 10^{-7}$  sec when excitation was

Card 1/2



L 1772-66

ACCESSION NR: AP5024687

by a ruby laser output which was also free of spikes. The temperature variation of the threshold with the temperature showed that room-temperature operation of the  $\text{CaF}_2:\text{Dy}^{2+}$  laser was very unlikely, due to broadening of the lower laser line with the temperature. Generation was also achieved when  $\text{CaF}_2:\text{Dy}^{2+}$  was excited by several 0.5- $\mu$ s giant pulses of  $\sim 30$  nanosec duration, when the giant pulses followed one another after 100—200  $\mu$ sec. The first pulse from a ruby laser resulted in the appearance of a few spikes the intensity of which was 2 orders of magnitude smaller than that of the exciting pulse. The second and third giant pulses produced giant pulses in  $\text{CaF}_2:\text{Dy}^{2+}$  (pulse duration 30—40 nanosec) with the first pulse delayed by 100—200 nanosec and the second, by 30—40 nanosec. The failure to achieve laser action by a single giant pulse is explained. Orig. art. has: 3 figures. [CS]

ASSOCIATION: Fizicheskii institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 19Feb65

44,55  
ENCL: 00

SUB CODE: ECOP

NO REF SOV: 003

OTHER: 001

ATD PRESS: 4111

*mlb*  
Card 2/2

SHIPUNOV, A.

Friends lend a helping hand. Mast. ugl. 8 no.11:13 H '59.  
(MIRA 13:2)

1. Predsedatel' komiteta profsoyuza shakhty "Baydayevskaya" kombinata  
Kuzbassugol'.  
(Kuznetsk Basin--Coal mines and mining)

MIKOYAN, A.I.; MARINENKO, A.Ya., inzh.; RAPPOPORT, A.M., inzh.;  
SLEPNEV, K.V., inzh.; SYROVOY, P.Ye., inzh.. Prinimali  
uchastiye: BORODIN, D.D., inzh.; ZHARKOV, M.A., inzh.;  
SHIPUNOV, B.G., inzh.; KURAKOV, V.Ya., tekhnik. STRAKHOV,  
L.G., otv.red.; KOMPANTSEV, N.N., otv.red.; KRASIL'NIKOV,  
S.D., red.; ZUDAKIN, I.M., tekhn.red.

[The MIG-17PF and MIG-17F airplanes; instructions for operation  
and maintenance] Samolety MIG-17PF i MIG-17F; instruktsiya po  
tekhnicheskoi ekspluatatsii i obsluzhivaniyu. Moskva, Gos.izd-vo  
obor.promyshl., 1957. 143 p. diagrs.

1. Russia (1923- U.S.S.R.) Ministerstvo oborony.  
(Fighter planes) (Jet planes, Military)

SHIPUNOV, F.Ya.(Moskva)

Siberian pine in the mountains of the northwestern Altai.

Priroda 53 no. 11:130 '64.

(MIRA 18:1)

OVSYANNIKOV, S.G., kand. ekon. nauk; GRINMAN, G.I.; SHIPUNOV, I.F.;  
DRANICHNIKOV, I.F.; TYABUT, M.A.; KOLEVICH, A.G., red.;  
TORKAYLO, I., red.; DIK, V., tekhn. red.

[Accounting and auditing on collective farms; practical aid]  
Bukhgalterskii uchet i revizionnaia rabota v kolkhozakh;  
prakticheskoe posobie. Minsk, Sel'khozgiz BSSR, 1961. 246 p.  
(MIRA 15:7)

(Collective farms--Accounting)

SHIPUNOV, I.V., Cand Tech Sci -- (diss) "Study of the heating and cooling of electromagnets <sup>at</sup> induction accelerators." Tomsk, 1959, 18 pp (Min of Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst in S.M. Kirov. Phys Tech Faculty) 150 copies (KL, 38-59, 116)

- 60 -

21.2300

AUTHORS:

Gurchenok, A.A., Cand.Tech.Sci., Docent; and  
Shipunov, I.V., Chief Engineer.

TITLE:

The Cooling System of the Electromagnet of a Double-Beam  
25 MeV Betatron

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy,  
Elektromekhanika, 1959, Nr 1, pp 132-135 (USSR)

ABSTRACT:

The 25 MeV betatron was described in Ref 1. Energy losses in the steel at 150 c/s are 25 kw, and calculations have shown that the magnetic circuit must be artificially cooled. Fig 1 shows the final system for air cooling of the magnet. The system consists of two independent ventilation circuits, one for the upper and one for the lower part of the electromagnet. A collecting air duct is fitted to the upper and lower yokes and vertical ventilators (1) are attached to it. The electric motors (2) of the ventilators are supported by special brackets to the air ducts which collect the air passing through the cooling tubes inside the electromagnet. The cooling channels (4) are formed by special rectangular slits 10 x 100 mm in size, as shown in Fig 1. The cooling air

Card  
1/2

66537

SOV/144-59-1-18/21

The Cooling System of the Electromagnet of a Double-Beam 25 MeV  
Betatron

enters through the windows (5) on each side of the yoke,  
is drawn through the channels, and then collected by the  
air duct, from which it is removed by the ventilators.  
The amount of air drawn through each system is 7000 m<sup>3</sup>/hr,  
and the speed in the internal channels shown in Fig 1 is  
14-16.5 m/sec. Simple formulae are derived for  
estimating the amount of heat removed.  
There are 1 figure, 1 table and 5 Soviet references.

ASSOCIATION: Kafedra teoreticheskoy i obshchey teplo tekhniki,  
Tomskiy politekhnicheskiy institut (Chair of  
Theoretical and General Heat Engineering, Tomsk  
Polytechnical Institute) and  
Fiziko-tekhnicheskiy fakul'tet, Tomskiy  
politekhnicheskiy institut (Physico-Technical Department,  
Tomsk Polytechnical Institute)

Card 2/2



21,2300

68134

AUTHORS: Shipunov, I. V., Chief Engineer and Yakovlev, B.M.,  
Junior Scientific Worker SOV/144-59-2-16/19

TITLE: Problems Encountered in the Cooling of a Betatron Magnet 21

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika,  
1959, Nr 2, pp 121-123 (USSR)

ABSTRACT: The use of betatrons in industry, medicine and research institutions means that they have to run for long periods of time. The heating of the electromagnet must not, however, exceed certain recommended limits and, therefore, the problem of the cooling of the electromagnet becomes important. The U-shaped magnetic circuit is the most widely used. The magnetic flux in such cores is distributed very nonuniformly. In order to estimate the effect of heating it is necessary to determine points of maximum temperature. Analytically this is very difficult. The present paper reports results of experiments on the determination of the temperature distribution in U-shaped cores. The central inserts and pole pieces are the most strongly heated parts of the magnetic circuit. The temperature distribution was determined using resistance thermometers and the temperature was measured at 30 to

Card1/2

SOV/144-59-2-16/19

Problems Encountered in the Cooling of a Betatron Magnet

40 points simultaneously. The temperature distribution was obtained with and without forced ventilation. The loss of heat by the magnet yoke was determined from the empirical formula

$$\alpha_v = \alpha (1 + 0.075v) \text{ W/cm}^2 \cdot ^\circ\text{C},$$

where  $\alpha$  is the heat loss in quiescent air from the surface of the yoke and  $v$  is the air speed in the space between the poles in m/sec. In order to increase the cooling surface, copper cooling fins were used. These cooling fins pass right into the core of the electromagnet. Special empirical formulae which describe the heat loss in such a system have been obtained and are now given.

There are 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy fakul'tet, Tomskiy politekhnicheskii institut (Physics-Engineering Faculty, Tomsk Polytechnical Institute)

Card 2/2

21.2/00  
AUTHORS:  
Belov, Ye.M., Aspirant, Gorbunov, V.I., Alababov, Genl. of  
Technical Sciences, Kuznetsov, A.I., Engineer,  
Titov, V.R., Candidate of Technical Sciences, Docent,  
and Shipunov, I.V., Chief Engineer of Polytechnical Inst.  
TITLE: A 25 Mev Double-Beam Betatron  
PERIODICAL: Izvestiya vuzovskikh uchabnykh svedeniya. Elektromekhanika,  
1959, Nr. 4, pp 123 - 128 (USSR)  
ABSTRACT: The 25 Mev betatron was designed and built by the Tomsk  
Polytechnical Institute and can be used to obtain a dose  
of 50-60 rads per min at a distance of 1 m. The  
betatron was first described in Ref 1 and was designed to  
work off the ordinary 50 cps mains. In order to increase  
the intensity both half-periods of the sinusoidal  
currents at a tripled frequency (150 cps) were used to supply  
the inducting magnetic field. The frequency tripler was  
designed and built by the Institute. In connection with the use of the increased  
frequency, experiments were carried out in order to choose  
the type of windings and the cooling system for the

Card 1/1

electromagnet. The results of these experiments and the  
final form of the electromagnet are now described. The beta-  
tron was a U-shaped magnet with a core made of sheet  
steel. The magnet is dismountable and consists of two  
symmetric sections. The two-channel electron injection  
system, working on 150 cps is shown in Figure 4.  
The two-channel synchronization scheme is shown in Figure 5.  
Other details described include a megavoltmeter, vacuum  
system and the injection system.  
There are 8 figures and 5 Soviet references.  
ASSOCIATION: Tomskiy politekhnicheskii institut (Tomsk  
Polytechnical Institute)

Card 2/2

SHIPOV, N.

Remodeling the KAZ-501 motortruck for truss transportation. Avt.-  
transp. 40 no.1:51 da '62. (MIRA 15:1)  
(Trusses--Transportation)

SHIPUNOV, N.Y.

Protective switching out in electric circuits on 380 v. used in open coal mines. Trudy MNI no.28:237-253 '56. (MIRA 10:6)  
(Electric engineering--Safety measures)

SHIPUNOV, N. V., Candidate Tech Sci (diss) -- "Protective circuit-breaking, conditions, and range of application". Moscow, 1959. 18 pp (Min Higher Educ USSR, Moscow Order of Lenin Power Engineering Inst), 150 copies (KL, No 24, 1959, 144)

MARUSOVA, T.P., kand. tekhn. nauk; SHIPUNOV, N.V., kand. tekhn. nauk;  
PETRI, L.O., inzh.

Investigating the conditions for electrical safety in salt  
mines. Cor. zhur. no.11:69-70 N '64. (MIRA 18:2)

1. Moskovskiy energeticheskiy institut.

SHIPUNOV, S.P.

Hydrometeorological security in the construction of the South  
Ukrainian Canal and the North Crimea Canal. Meteor.i gidrol.  
no.4:21-22 Ap '53. (MIRA 8:9)

1. Hidrometeorologicheskoye byuro, Zaporozh'ye  
(South Ukrainian Canal) (North Crimea Canal)



SHIPUNOV, V.B.

Device for manufacturing wedges for electric motors. Med. prom.  
17 no.9:44-45 8'63. (MIRA 17:5)

1. Izobreteniye ob'yedineniya prespriyatny meditsinskoy tekhniki  
"Kommunar'oyets".

SHIFUNOVA, A.M., inzh.

Effect of severe frosts on the strength and deformability of  
masonry work. Prom. stroi. 38 no.9:53-56 '60. (MIRA 13:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'noy  
konstruktsii.

(Building, Brick--Cold weather conditions)

SHIPUNOVA, L. G.

gravimetric method for the rapid determination of sulfate ion.  
 P. M. ISAYEV AND L. G. SHIPUNOVA. Nauch. byull. Leningrad Gosudarst.  
 Univ. 1946, No. 13. pp. 7-10.- The form and size of  $\text{BaSO}_4$  crystals is  
 improved considerably when picric acid is added to the solution con-  
 taining the sulfate ions before the  $\text{BaSO}_4$  is precipitated. The picric  
 acid has no effect on crystal size if added after the  $\text{BaSO}_4$  is precipitated;  
 the amount of acid added also had no effect on crystal size. This method  
 makes it possible to filter the precipitate from the hot solution. The  
 time required for analysis is 2.5 to 3 hr. instead of 15 to 16 hr. without  
 picric acid.  
 B.Z.K.

MORACHEVSKIY, Yu.V.; SHIPUNOVA, L.G.; NOVOZHILOVA, L.D.

Coprecipitation of tungsten with ferric hydroxide. Uch. zap. LGU  
no.297:58-62 '60. (MIRA 13:11)

(Tungsten)

(Iron hydroxide)